

# Five-Year Review Report

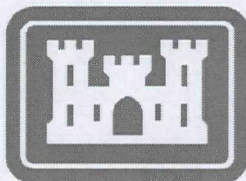
## Third Five-Year Review Report

For

**Cedartown Municipal Landfill Site  
(EPA ID #: GAD980495402)**

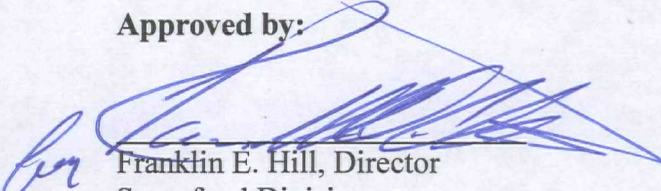
**City of Cedartown, Polk County, Georgia**

**September 2011**

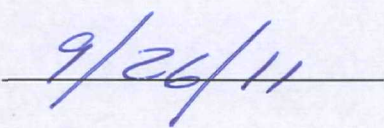


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## List of Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminants of Concern
CSF	Cancer Slope Factor
DNR	Department of Natural Resources
EPA	Environmental Protection Agency
EPD	Georgia Environmental Protection Division
ESD	Explanation of Significant Differences
FS	Feasibility Study
FYR	Five Year Review
GCL	Geosynthetic Clay Liner
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MDL	Method Detection Limit
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
O&M	Operations and Maintenance
OU <sub>s</sub>	Operable Units
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
QA/QC	Quality Assurance/Quality Control
RA	Remedial Action
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RfD	Reference Dose
RI	Remediation Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendment and Reauthorization Act
SVOC <sub>s</sub>	Semi-Volatile Organic Compounds
TBC	To Be Considered Criterion
UAO	Unilateral Administrative Order
µg/L	Micrograms per liter
USACE	U.S. Army Corps of Engineers
VOC <sub>s</sub>	Volatile Organic Compounds



## Executive Summary

The United States Environmental Protection Agency (EPA) Region IV has conducted a five-year review (FYR) of the remedial actions implemented at the Cedartown Municipal Landfill Superfund Site in Polk County, Georgia. Technical support for the review was provided by the U.S. Army Corps of Engineers (USACE), Savannah District. This review was conducted from March 2011 through June 2011. This report documents the results of that review. This is the third FYR for the Cedartown Municipal Landfill Superfund Site. The first FYR was completed on 28 September 2001. The second FYR was completed on 28 September 2006. The trigger for this third FYR corresponds to EPA concurrence signature date of the second FYR Report, 28 September 2006. The FYR is required by Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) because the remedial action, upon completion, left hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure.

All remedies have been constructed for the site. The site was deleted from the National Priorities List (NPL) on 10 March 1999. Since that time the landfill cover has not been inspected. Ground-water monitoring at the site has not occurred since September 2006.

Based on documents, data, and Applicable or Relevant and Appropriate Requirements (ARAR) reviews; interviews; and site inspection, the remedy is generally functioning as intended by the Record of Decision (ROD), as amended. ARARs for groundwater were evaluated and no changes were identified that would affect the protectiveness of the remedy.

The only issue identified during the FYR is the current wooded state of the landfill cover. The landfill cover should be restored and should subsequently be properly maintained and inspected regularly.

The remedy at the site currently protects human health and the environment because there is no evidence of exposure. However, in order for the remedy to be protective in the long-term, the condition of the landfill cover needs to be addressed.

## Five-Year Review Summary Form

<b>SITE IDENTIFICATION</b>		
Site name: Cedartown Municipal Landfill Site		
EPA ID: GAD980495402		
Region: IV	State: GA	City/County: Cedartown, Polk County
<b>SITE STATUS</b>		
NPL status: Deleted from NPL		
Remediation status (under construction, operating, complete): Complete		
Multiple OUs*: No    Construction completion date: 8/16/1996		
Has site been put into reuse? No		
<b>REVIEW STATUS</b>		
Lead agency (EPA, State, Tribe Federal agency): US EPA		
Author name: Kevin Haborak and Frank Burwell		
Author title: Technical Managers	Author affiliation: US Army Corps of Engineers, Savannah District	
Review period: 03/01/2011 to 09/28/2011		
Date(s) of site inspection: 04/21/2011		
Type of Review: Statutory		
Review Number: 3 (Third)		
Triggering action event: Second Five-Year Review		
Trigger action date (from CERCLIS): 09/28/2006		
Due date: 9/28/2011		

\* "OU" refers to operable unit.

### **Five –Year Review Summary Form, cont'd.**

**Issues:**

- 1) Current wooded state of the landfill cover.

**Recommendations and Follow-up Actions:**

- 1) The landfill cover should be restored and should subsequently be properly maintained and inspected regularly.

**Protectiveness Statement:**

The remedy at the site currently protects human health and the environment because there is no evidence of exposure. However, in order for the remedy to be protective in the long-term, the condition of the landfill cover needs to be addressed.

**Other Comments:**

None

# 1 Introduction

The purpose of a Five-Year Review (FYR) is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports. In addition, FYR reports identify issues found during the review, if any, and provide recommendations to address them.

The United States Environmental Protection Agency (EPA) is the lead agency for this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §121(c), and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA §121 states:

*If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five-years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with Section 9604 (CERCLA §104) or Section 9606 (CERCLA §106) the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The EPA interpreted this requirement further in the NCP, as stated in 40 Code of Federal Regulations (CFR) §300.430(f)(4)(ii):

*If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five-years after the initiation of the selected remedial action.*

This is the third FYR for the Cedartown Municipal Landfill Superfund Site. The first FYR was completed on 28 September 2001 and the second FYR was completed on 28 September 2006. The trigger for this third FYR corresponds to EPA concurrence signature date of the second FYR Report, 28 September 2006. The third FYR was initiated in March 2011 and is considered complete as of the date of approval on the signature page. This statutory FYR is required by CERCLA because the remedial action, upon completion, will leave hazardous substances, pollutants, or contaminants on site above levels that allow for unlimited use and unrestricted exposure. All remedies have been constructed for the site. The site was deleted from the NPL on 10 March 1999. Since that time, there has been no maintenance performed on the landfill cover nor has the landfill cover been inspected. Ground-water monitoring at the site has not occurred since September 2006.

## 2 Site Chronology

Table 1 lists the chronology of events for the Cedartown Municipal Landfill Superfund Site.

**Table 1. Chronology of Site Events**

<b>Event</b>	<b>Start Date</b>	<b>Completion Date</b>
Discovery		04/18/1985
Preliminary Assessment		04/18/1985
NPL RP Search		03/26/1987
Site Inspection		05/15/1987
HRS Package		10/13/1987
Proposal to NPL		06/24/1988
Final Listing on NPL		03/31/1989
Administrative Order on Consent		03/30/1990
RI/FS Negotiations	12/14/1989	03/30/1990
Removal Assessment	09/11/1991	09/11/1991
Record of Decision		11/02/1993
PRP RI/FS	03/30/1990	11/02/1993
Administrative Records	04/29/1993	11/29/1993
RD/RA Negotiations	03/28/1994	03/28/1994
Unilateral Administrative Order		05/12/1994
PRP RD	05/23/1994	11/04/1994
Administrative Order on Consent		09/29/1995
Explanation of Significant Differences		06/03/1996
Preliminary Close-Out Report Prepared		08/16/1996
Record of Decision Amendment		05/12/1998
PRP Remedial Action	11/04/1994	02/25/1999
Deletion from NPL	11/23/1998	03/10/1999
First FYR	06/12/2001	09/28/2001
Second FYR	04/01/2006	09/28/2006
Groundwater Sampling Event	07/20/2006	07/21/2006

### **3 Background**

#### **3.1 Physical Characteristics**

The 94-acre Cedartown Municipal Landfill site is located on the outskirts of the City of Cedartown, Polk County, GA, approximately 62 miles NW of Atlanta. A depiction of the site layout is included as Figure 1. The site encompasses a former iron ore mine, which subsequently was used as a municipal landfill. The site is on the western edge of Cedartown and is bordered to the east by Tenth Street, the south by Prior Station Road (Route 100), and the north and west by undeveloped or agricultural land. Property to the east of the site consists of an industrial complex, while land to the north, south, and west is a mixture of residential, agricultural, and undeveloped land.

The site is wooded and has wooded areas along the north, south and west. Approximately 10-acres between the eastern and western halves of the Site were not used for landfill operations. The crown of the Site is 872 feet above mean sea level and gently slopes on all sides with the exception of portions of the western perimeter which are relatively steep. An unnamed seasonal stream and pond exist approximately 700 feet west of Tenth Street. In the past, minor areas of erosion have been noted in the central, northwest and eastern portions of the site. No exposed refuse was noted in any of the eroded areas.

Groundwater flow beneath the site generally flows to the northeast. A copy of the most recent potentiometric map is included as Figure 2.

The source of drinking water for the City of Cedartown is Cedar Spring. The surveyed elevation for Cedar Spring is higher than the elevation of groundwater on the site, therefore cedar spring is upgradient of the site.

The site is completely fenced and access to the site is further limited due to the dense vegetation along the northern, southern, and western boundaries of the site.

#### **3.2 Land and Resource Use – Past, Present, and Future**

The site was originally developed in the 1880's as an iron ore strip mine. Mining operations at the site continued off and on until the 1900's. At that time the land was leased and then acquired by the city of Cedartown to be used as a landfill. The site was permitted from the Georgia Environmental Protection Division to operate as a sanitary landfill.

The majority of the site is currently wooded land. The City of Cedartown does have a metal structure on the eastern edge of the site that is used for equipment storage and maintenance. The current use for the parcels surrounding the site to the north, south, and east is industrial. The area to the west is agricultural land with a residential neighborhood further to the west. The anticipated land use for the site and the surrounding area is for the parcels to remain industrial, agricultural, and residential for the foreseeable future.



### **3.3 History of Contamination**

During operation as a landfill, the open pits from the mining operations were used for waste disposal. These pits contained native clay and, in some cases, had been partially backfilled with clay stockpiled from mining operations. The site primarily received municipal solid waste; although, it did receive some industrial waste including: industrial waste sludge, animal and vegetable fats and oils, liquid dye wastes, latex paint, and plant trash. Once wastes were placed in the pits, the pits were covered and graded. The landfill was closed in 1979 with a layer of clay varying in thickness from 1 to 12 feet and a vegetative cover

Records as to the sequence of development of the landfill are not available, however, an interpretation of aerial photographs of the Site completed by the USEPA Environmental Monitoring Systems Laboratory suggested an outline of the development of the Site. According to this interpretation of the aerial photographs, development of the Site proceeded as follows:

- 1960 - approximately 4 acres of fill material existed on the eastern section of the Site with three areas of debris located north and east of the fill area;
- 1966 - approximately 19 acres of fill material existed and landfilling activities were concentrated in the northern section of the Site;
- 1972 - approximately 63 acres of fill material existed and landfilling activities were proceeding in a southerly direction along the western perimeter of the Site;
- 1980 - approximately 90 acres of fill material existed and the area was graded and partially revegetated; and
- 1985 - no expansion of landfilling activities was observed and fill areas had been revegetated.

### **3.4 Initial Response**

The site was proposed for the NPL in 1988 and finalized in March 1989. The Cedartown Municipal Landfill Potentially Responsible Party (PRP) Committee completed the RI/FS in 1993 pursuant to EPA Administrative Order of Consent in 1990.

The selected remedial alternative in the Feasibility Study (FS) addressed contaminated ground water and leachate. The remedial alternative included cover maintenance, institutional controls, and monitored natural attenuation.

### **3.5 Basis for Taking Action**

The baseline risk assessment conducted as part of the Remedial Investigation (RI) identified the following contaminants of concern (COCs) in ground water: Manganese, Beryllium, Cadmium, Chromium, and Lead. Pathways of exposure included ingestion of ground water and exposure to surface waters. The baseline risk assessment determined that the soil and soil/waste at the site did not present an unacceptable risk at the site. Therefore no Contaminants of Concern (COCs) were retained for soil and soil/waste.

## **4 Remedial Actions**

### **4.1 Remedy Selection**

#### **4.1.1 1993 Record of Decision**

The Record of Decision (ROD) for the site was issued on 2 November 1993. The Remedial Action Objectives stated in the ROD for the site were:

- Overall protection of human health and the environment;
- compliance with applicable and/or relevant Federal or State public health or environmental standards;
- long-term effectiveness and permanence;
- reduction of toxicity, mobility, or volume of hazardous substances or contaminants;
- short-term effectiveness or the impacts a remedy might have on the community, workers, or the environment during the course of implementation;
- implementability, that is, the administrative or technical capacity to carry out the alternative;
- cost-effectiveness considering costs for construction, operation, and maintenance of the alternative over the life of the project, including additional costs should it fail;
- acceptance by the State; and,
- acceptance by the Community.

The selected Remedial Action (RA) at this site includes: maintaining the cover and seep controls, deed restrictions and land use restrictions, surface-water monitoring; natural attenuation, ground-water monitoring, and a two year review. If continued monitoring indicated that natural attenuation is not effective, a contingency Remedial Action to extract and treat the ground water with a "to be determined" technology would be implemented with off-site discharge. The total O&M costs were estimated at a present worth cost of \$615,000 during remedy selection or an O&M duration of 30 years.

Major components of the selected remedy, as stipulated in the Record of Decision, include:

- Cover maintenance and seep controls;
- Institutional controls, such as record notices and deed, zoning, and land-use restrictions;
- Groundwater monitoring program to ensure natural attenuation processes would be effective and that contaminants would not migrate;
- A two year review during which EPA would determine whether groundwater performance standards continue to be appropriate and if natural attenuation processes are effective. EPA shall consider and at EPA's sole discretion implement an active ground water contingency remedial action if groundwater performance standards continue to be appropriate and natural attenuation processes are not effective;

- Contingency remedial action to include ground-water extraction, on-site treatment, and discharge under National Pollution Discharge Elimination System (NPDES) to nearby surface water or Publicly Owned Treatment Works (POTW); and,
- Continued ground-water monitoring upon attainment of the performance standards at sampling intervals to be approved by EPA until EPA approves a five year review concluding that the alternative has achieved continued attainment of the performance standards and remains protective of human health and the environment.

#### **4.1.2 1996 Explanation of Significant Difference**

In June 1996 the EPA published an Explanation of Significant Difference (ESD) Superfund Fact Sheet for the Cedartown Landfill. The scope of the ESD involved changing the performance standard for manganese. The performance standard was changed from 175 micrograms per liter (ug/l) to 840 ug/L based on changes in the reference dose.

#### **4.1.3 1998 Record of Decision Amendment**

Based upon the Administrative Record, the requirements of the CERCLA and the NCP, the detailed analysis of alternatives, and consideration of public and state comments; the EPA selected an amended remedy for this site. The ROD Amendment was signed on 12 May 1998. The selected cleanup alternative to reduce COC concentrations to levels protective of human health and the environment posed by contamination found at the Cedartown site involved implementation of institutional controls to restrict ground-water use in the areas where performance standards are exceeded, and performing maintenance of the landfill cover. Ground-water monitoring would not be continued since existing data had demonstrated that contamination was not migrating away from the site. Specifically, the ROD Amendment stated:

*Groundwater monitoring for two and one half years has demonstrated that groundwater contamination levels for all contaminants of concern, except manganese, are below performance standards. Groundwater concentrations of manganese have remained stable in the wells which are contaminated. Manganese contamination has not moved to more distant wells. In addition, EPA analysis of groundwater data demonstrates that manganese contamination in the wells exceeding the groundwater performance standard does not appear to be related to landfill impacts.*

The ROD Amendment also removed the contingency action of pump and treat. Although the AROD removed the requirement for groundwater monitoring, the AROD Declaration stated that a groundwater sampling event would be done as part of the first FYR, as part of the FYR protectiveness determination (this sampling event was conducted as part of the Second FYR in 2006). The estimated cost of implementing the amended ROD was \$5,000 at the time of the amendment.

Major components of the amended remedy, include:

- Maintenance of the landfill cover;
- Institutional controls to restrict ground-water use beneath and immediately surrounding the site; and
- Removal of the requirement for groundwater monitoring and the pump and treat contingency, while requiring a groundwater sampling event as part of the first FYR.

#### **4.1.4 1999 NPL Deletion**

The Site Close Out Report was submitted in September 1998. The report stated:

This site meets all the site completion requirements as specified in OSWER Directive 9320.2-3C, *Procedures for Completion and Deletion of National Priorities List Sites and Update*. Specifically, confirmation sampling verifies that the site has achieved the ROD cleanup objective, that groundwater use is restricted in areas where groundwater performance standards are exceeded by institutional controls. In addition, landfill cover maintenance and seep controls are continuing. All remedial actions specified in the ROD, as amended, have been implemented.

The EPA published a Notice of Intent to Delete the Cedartown Municipal Landfill Site from the NPL on November 23, 1998 in the Federal Register (63 FR 64668- 64669). The closing date for comments on the Notice of Intent to Delete was December 23, 1998. No comments were received by the EPA and the Notice of Deletion of Cedartown Municipal Landfill Superfund Site from the National Priorities List was published on January 15, 1999.

## **4.2 Remedy Implementation and Description**

- Landfill cover and seep inspections were conducted semi-annually for the duration of the RA program (November 1994 – February 1998). They have not been conducted since even though the requirement to perform maintenance was not lifted when the site was deleted from the NPL.
- Monitoring data collected quarterly during the RA (January 1995 – September 1997) revealed that the only COC consistently detected in some of the perimeter monitoring wells was manganese. Analysis of the ground-water data revealed three perimeter monitoring wells have a significantly higher concentration of manganese than the mean manganese concentration from interior monitoring-wells. This indicated the manganese detected was naturally occurring. This historic ground-water data may be viewed in Appendix A of this document.
- Based on the results of ground-water monitoring, the ROD was amended (May 1998) to remove the requirements for ground-water monitoring and the pump and treat contingency, while requiring a groundwater sampling event as part of the first FYR.

- Deed restrictions have been placed in effect as stipulated by the amended Record of Decision (May 1998).
- The first FYR for this Site was completed in September 2001, while the groundwater sampling event required by the amended ROD's Declaration was conducted in 2006. This document is the third of the FYRs to be prepared for the site. Thus, these conditions of the ROD and amended ROD have been fulfilled.

### **4.3 Systems Operation & Maintenance**

The landfill cover has not been maintained nor has it been inspected since 1999. The operation or maintenance activities performed include annual mowing of some of the access trails. When a site is deleted from the NPL, the EPA determines that no further response action is necessary. However, O&M activities associated with containment remedies are not considered to be response actions.

The monitoring well network consisted of thirteen groundwater wells. The most recent groundwater monitoring event was conducted in 2006 as a part of the second FYR. Perimeter wells OW-1, CL-03-WP, and interior wells CL-05-WP, and CL-06-WP were found to be damaged and could not be sampled during the July 2006 sampling event. Since the monitoring wells no longer serve a useful purpose and no future use is planned, the wells should be abandoned in accordance with GAEPD regulations.

### **4.4 Costs and Effort**

The current Operation & Maintenance (O&M) cost associated with site are minimal (<\$500), as the only O&M performed is the annual mowing of a few trails. This effort takes one person approximately two to four hours to complete.

## **5 Progress Since Last Review**

### **5.1 Protectiveness Statement From the Second FYR**

The protectiveness statement from the Second FYR reads as follows:

*The remedy is considered protective in the short-term, because there is no evidence of exposure. However, in order for the remedy to remain protective in the long-term, the landfill cover must be inspected semi-annually and maintained by the City of Cedartown.*

### **5.2 Overall Progress**

The second FYR determined the protectiveness of the remedy for the site to be protective of human health and the environment in the short term. The report recommended that the landfill cover be inspected and maintained on a semi-annual basis.

No cover maintenance or bi-annual inspections have been performed (they have not been performed since the site was taken off the NPL).



## **6 Five-Year Review Process**

The purpose of a FYR is to determine whether the remedy at a site is protective of human health and the environment. A FYR does not reconsider decisions made during the selection of the remedy, but evaluates the implementation and performance of the selected remedy.

### **6.1 Administrative Components**

The USACE initiated the Five-Year Review upon notification from the EPA in March 2011. The USACE review team included members from the HTRW section, located in Savannah, Georgia, with expertise in environmental engineering and hydrogeology. Mr. Brian Farrier, EPA site Remedial Project Manager (RPM), coordinated the EPA Region 4 staff who participated in the Five-Year Review.

This is the third Five-Year Review for the Cedartown Municipal Landfill site. The schedule for the review extends through September 28, 2011. The components of the review included:

- Community notification;
- Document Review;
- Data Review;
- Site Inspection;
- Local Interviews; and
- FYR Report Development and Review.

### **6.2 Community Involvement**

The Cedartown Municipal Landfill Site has had little public involvement or interest since the site was deleted from the NPL. When completed, the FYR Report will be placed in the Cedartown Public Library, information repository for the project. A public notice has been placed in the Cedartown Standard announcing its availability for review and comment. A copy of the Public Notice is included as Appendix B.

A survey of the nearest residential neighborhood was performed during the site visit. This development lies approximately 1000 feet the west of the site, with farmland and wooded areas lying between the site and the development. The neighborhood is only partially developed and contains approximately 20-30 houses, many of the houses appear to be vacant. Only one resident was encountered during the survey of the neighborhood, Mr. Joeseeph Chupp. (His comments about the site are in Section 6.6.)

### 6.3 Document Review

Electronic copies of all site documents were provided by the EPA RPM. The project files were reviewed from April 1- 28. Documents that were reviewed were related to site investigations, feasibility studies, remedial design, the RODs, construction reports, operation and maintenance plans and monitoring data. The primary documents used in conducting the review are included in Table 2.

**Table 2. Documents Reviewed**

<b>Documents and Information Source</b>	<b>Summary of Contents Relevant to Five-Year Review</b>
"The Causes and Effects of Water Pollution in Cedartown, GA." Billy Grant, Environmental Science, 1971.	Documentation of contamination discharge
"Remedial Investigation/Feasibility Study Statement of Work, March 1990"	Scope of work done to provide basis for remedial action
"Administrative Order by Consent for RI/FS – Cedartown Municipal Landfill"	Order by EPA to undertake work
"Remedial Investigation Report" Prepared by Conestoga-Rovers & Associates	Results of Remedial Investigation, basis for remedial action
"Feasibility Study Report" Prepared by Conestoga-Rovers & Associates	Provides evaluation of risk, investigation results, and background information
"Record of Decision" EPA	Summary of alternatives, toxicity assessment, & threshold criteria
Letter from Conestoga-Rovers Associates to Jay Bassett, USEPA concerning Baseline Risk Assessment	Comments concerning the Baseline Risk Assessment
"Model Unilateral Administrative Order for RD/RA" Prepared by USEPA	Institutional controls
"Remedial Design / Remedial Action Work Plan" prepared by Conestoga-Rovers & Associates.	Institutional controls, contingent remedy implementation,
"USEPA Superfund Fact Sheet – Explanation of Significant Differences"	Explaining change in manganese performance standard for groundwater
"Two-Year Evaluation Report" Prepared by Conestoga-Rovers & Associates	Proposal to remove site from NPL, Manganese performance standard
"Amended Record of Decision Summary of Remedial Alternative Selection, Cedartown Municipal Landfill" Prepared by EPA Region IV.	Institutional Controls, Site maps, proposed changes in remedy
"Superfund Final Close Out Report" Prepared by EPA Region IV	Notice declaring that all work stated in the ROD had been constructed.
"Deletion Docket Site-Specific Index"	Shows timeline of project reports and shows deletion from NPL
"First Five Year Review Report for Cedartown Municipal Landfill." Prepared by USACE	Provided the first statutory review of the site and identified issues to be addressed.
"Second Five Year Review Report for Cedartown Municipal Landfill" Prepared by USACE	Provided the second statutory review of the site and identified issues to be addressed.
Aerial Photo Site Analysis Prepared by USEPA	Historical photo analysis
"Cedartown Municipal Landfill" EPA	Site Summary

## 6.4 Data Review

No data has been collected since the 2006 FYR. The data collected during the Remedial Action and presented in the Two-Year Evaluation report and the data from the 2006 FYR were reviewed. Ten rounds of ground-water monitoring occurred between January 1995 and September 1997 with an additional round in 2006. Appendix A provides a summary of the historical data. A description of sample results for the contaminants of concern follows.

**Beryllium:** For all of the RA monitoring events, concentrations of beryllium in both interior and perimeter monitoring wells were below the reported detection limit.

**Cadmium:** For all of the RA monitoring events, concentrations of cadmium in both interior and perimeter monitoring wells were below the reported detection limit.

**Chromium:** Chromium was detected several times in two interior monitoring wells, CL-06-WP and CL-07-WP and once in a perimeter monitoring well, OW-1, during the RA sampling. In 2006 chromium was detected in monitoring well CL-07-WP at a concentration of 130 ug/L. Chromium was not detected in any of the perimeter monitoring wells.

**Lead:** Lead was detected in each of the interior monitoring wells at least once during RA monitoring. Concentration range from 3.0 ug/L to 26.8 ug/L. None of the perimeter monitoring wells contained lead during any of the RA sampling events.

**Manganese:** In November 1995, the performance standard for manganese was changed by the EPA from 175 ug/L to 840 ug/L; thus, the regulatory limit for the Cedartown Municipal Landfill site was also changed. Manganese was consistently detected in perimeter monitoring wells during Remedial Action monitoring. In 2006 manganese was detected in monitoring well OW-3 at a concentration of 1,430 ug/L and in background monitoring well OW-6B at a concentration of 967 ug/L. The sampling data indicates monitoring well OW-3 historically contains manganese at higher concentrations than the landfill internal wells, CL-05-WP and CL-06-WP. The 1999 ROD Amendment stated that EPA analysis of groundwater data demonstrated that manganese contamination in the wells exceeding the groundwater performance standard does not appear to be related to landfill impacts.

## 6.5 Site Inspection

On April 21, 2011, Kevin Haborak and Frank Burwell (USACE) met with Brian Farrier (EPA Region IV) and Heather Clark (Georgia Department of Natural Resources [DNR] Environmental Protection Division [EPD]) to inspect the site. Mr. Joe Watts, Maintenance Supervisor for the City of Cedartown, showed the group around the landfill. Mr. Watts has been associated with the site for 22 years. Most of the areas inspected had been allowed to revert back to wooded plots (the exceptions being the select trails around the landfill). These conditions can be seen in some of the photos attached to this report. Inspection of the landfill cover for deficiencies such as cracks or depressions was limited due to the reforestation of the landfill cover. Mr. Watts stated that typically maintenance activities include annual cutting of vegetation along the access

trails. In areas that were more visible for inspections, the landfill cover appeared to be in good condition. Most of the monitoring wells could not be located due to the dense vegetation at the site. There were no indications of any other problems at the site. The Site Inspection Checklist is included as Appendix C. Site Photographs are included in Appendix D.

## 6.6 Interviews

On April 21, 2011, interviews with Joe Watts of the City of Cedartown, Brian Farrier of EPA Region IV, and Heather Clark of EPD were conducted at the site in Cedartown, GA by Kevin Haborak and Frank Burwell of USACE. The interviews were conducted in the form of a meeting with the above attendees participating in a group discussion of the site prior to performing the site walk-through. The documentation of those present at the meeting and a summary of the concerns of each individual is presented in Appendix E.

The group discussion began by asking Mr. Farrier and Mrs. Clark if they had any concerns about the current state of the site. Mr. Farrier stated that the landfill cover maintenance had not been performed since the site was deleted from the NPL and that a determination would need to be made if that was in acceptable condition. Mrs. Heather Clark indicated that she was concerned that landfill cover maintenance had not been performed and that the preferred course of action was to require the landfill landfill cover to be cleared and maintained as it was during the implementation of the remedy.

During the discussion with Mr. Watts, he stated that he had been involved with the site for 22 years. *He indicated that they have had trouble with trespassers in the past. The trespassers came onto the site to either hunt illegally or to steal items from the equipment shed.* The City of Cedartown addressed the issue by further limiting site access with additional fencing in areas that had inadequate site access controls and by enlisting the help of the DNR Conservation Rangers (more commonly known as Game Wardens) to police for illegal hunting. They have not had trouble with trespassers since they have instituted the additional protections.

Mr. Watts also indicated routine maintenance performed at the landfill site consists of the annual mowing of select site access trails. A larger clearing was performed in 2006 to allow for easy access to the site monitoring wells during the sampling event that was performed concurrent with the second FYR, but these areas are not included in the annual maintenance program. No other maintenance or inspections have been performed since the site was deleted from the NPL.

Subsequent to the site visit, a follow-up interview was conducted with Brian Farrier and Heather Clark via email. The purpose of the follow-up interviews was to determine if any additional concerns about the site arose as a result of the site inspection and the interview with Mr. Watts. Mrs. Clark responded in a letter dated September 20, 2011, Mr. Farrier responded via email. The documentation of the replies to the questions is presented in Appendix E.

On April 21, 2011, an interview with local resident Joeseeph Chupp was conducted at his residence on Montanna Drive in Cedartown, GA. Mr. Chupp stated that he had no knowledge of the existence of the landfill. He further stated that he was connected to the county water supply and that he had no concerns about the site.

## 7 Technical Assessment

### Question A: Is the remedy functioning as intended by the decision documents?

The ROD indicates that the purpose of the remedy was to provide protection by performing groundwater monitoring, surface water monitoring, and inspections and maintenance on the landfill cover while the remedy was being implemented; and to provide for long term protectiveness through deed restrictions that would limit access to affected groundwater. A copy of the deed restrictions is presented in Appendix F. The ROD amendment removed the requirement of groundwater and surface water sampling.

The documents, data, ARAR reviews, interviews, and site inspection indicate the remedy is generally functioning as intended by the decision documents. Deed restrictions have been put in place to provide long term protectiveness from exposure to groundwater and the property is fenced and access to the site is limited to authorized personnel to prevent exposure to groundwater seeps. Protectiveness was maintained during the implementation of the remedy through semi-annual inspections and maintenance on the landfill cover. The performance standards were met and the remedy was considered complete in 1998. The original requirements for semi-annual inspections and maintenance of the landfill cover, as specified in the amended ROD, were not removed when the site was deleted from the NPL. The landfill cover should be restored and inspected regularly as dictated by the decision documents. Visual inspections during the FYRs will continue to be impeded without the landfill cover being cleared and routine maintenance/inspections performed.

### Question B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

The exposure pathways, toxicity values, risk assessment methods, and standards identified in the ROD, subsequent ESD and ROD amendment were reviewed to identify changes that may affect the protectiveness of the remedy.

No new exposure pathways were identified that could affect the protectiveness of the remedy. The initial risk assessment did not consider the vapor intrusion pathway. Vapor intrusion occurs when gases or vapors from chemicals in soil or groundwater migrate into occupied buildings. Until recently, this transport pathway was not routinely considered in RCRA or CERCLA investigations. Vapor intrusion is now a standard consideration during these investigations. This pathway was not considered in the final baseline risk assessment. Exposure via the vapor intrusion pathway does not affect the current protectiveness of the remedy since the COCs are metals (i.e., a complete exposure pathway does not exist).

A comparison of the toxicity data used in the decision documents to current toxicity data is included as Appendix G. Note that many toxicity values have changed. An increase in the Cancer Slope Factor (CSF) will produce an increase in risk for the same on-site concentration. Conversely, a decrease in the noncarcinogenic reference dose (RfD) will produce an increased

hazard quotient for the same on-site concentration. Both would cause a decrease in a calculated remedial goal.

Performance standards were established for manganese, beryllium, cadmium, chromium, and lead in groundwater. Only the standard for manganese was based on calculations of acceptable risk levels. The RfD for manganese increased in 1995. The remedial goal was increased in the 1996 ESD to account for the change in the RfD. This increase in the remedial goal does not affect the protectiveness of the remedy.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified that would call into question the protectiveness of the remedy. The land use in the immediate vicinity of the site is primarily industrial and agricultural and is expected to remain that way for the foreseeable future.

#### Technical Assessment Summary

Based on documents, data, and ARAR reviews; interviews; and site inspection, the remedy is generally functioning as intended by the ROD, as amended. ARARs for groundwater were evaluated and no changes were identified that would affect the protectiveness of the remedy. The current wooded state of the landfill cover could cause the landfill cover to deteriorate and affect the long term protectiveness of the remedy.



## 8 Issues

Issues for the Cedartown Landfill site are presented in **Table 3**. This table summarizes some of the concerns raised in the previous sections. Corresponding recommendations and follow-up actions are discussed in Section 9. A yes answer to whether the issue affects future protectiveness does not mean that the remedy is not currently functioning as intended; rather, it implies that if the issue is not addressed, then at some point the remedy may no longer function as intended.

**Table 3 Issues**

<b>Issue</b>	<b>Currently Affects Protectiveness (Y/N)</b>	<b>Affects Future Protectiveness (Y/N)</b>
1) Current wooded state of the landfill cover.	N	Y

## 9 Recommendations and Follow-up Actions

Recommendations and follow-up actions for the items discussed in Section 8 are presented in **Table 4**. A yes answer to whether the recommendation affects future protectiveness does not mean that the remedy is not currently functioning as intended; rather, it implies that if the issue is not addressed then at some point the remedy may no longer function as intended.

**Table 4 Recommendations**

Issue	Recommendation/ Follow-Up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness	
					Current?	Future?
1	The landfill cover should be restored and should subsequently be properly maintained and inspected regularly.	Cedartown Municipal Landfill PRP Committee	EPA	December 30, 2011	N	Y

## **10 Protectiveness Statement**

The remedy at the site currently protects human health and the environment because there is no evidence of exposure. However, in order for the remedy to be protective in the long-term, the condition of the landfill cover needs to be addressed.

## **11 Next Review**

The next FYR for the Cedartown Municipal Landfill Site is required to be completed within five years of the approval date of this review.

## FIGURES



— Approximate Landfill Boundary

0 362.5 725 1,450  
Feet



U.S. ARMY ENGINEER DISTRICT  
CORPS OF ENGINEERS  
SAVANNAH, GEORGIA

CEDARTOWN MUNICIPAL  
LANDFILL SITE

CEDARTOWN, GA

DATE: SEPT 2011

FIGURE 1



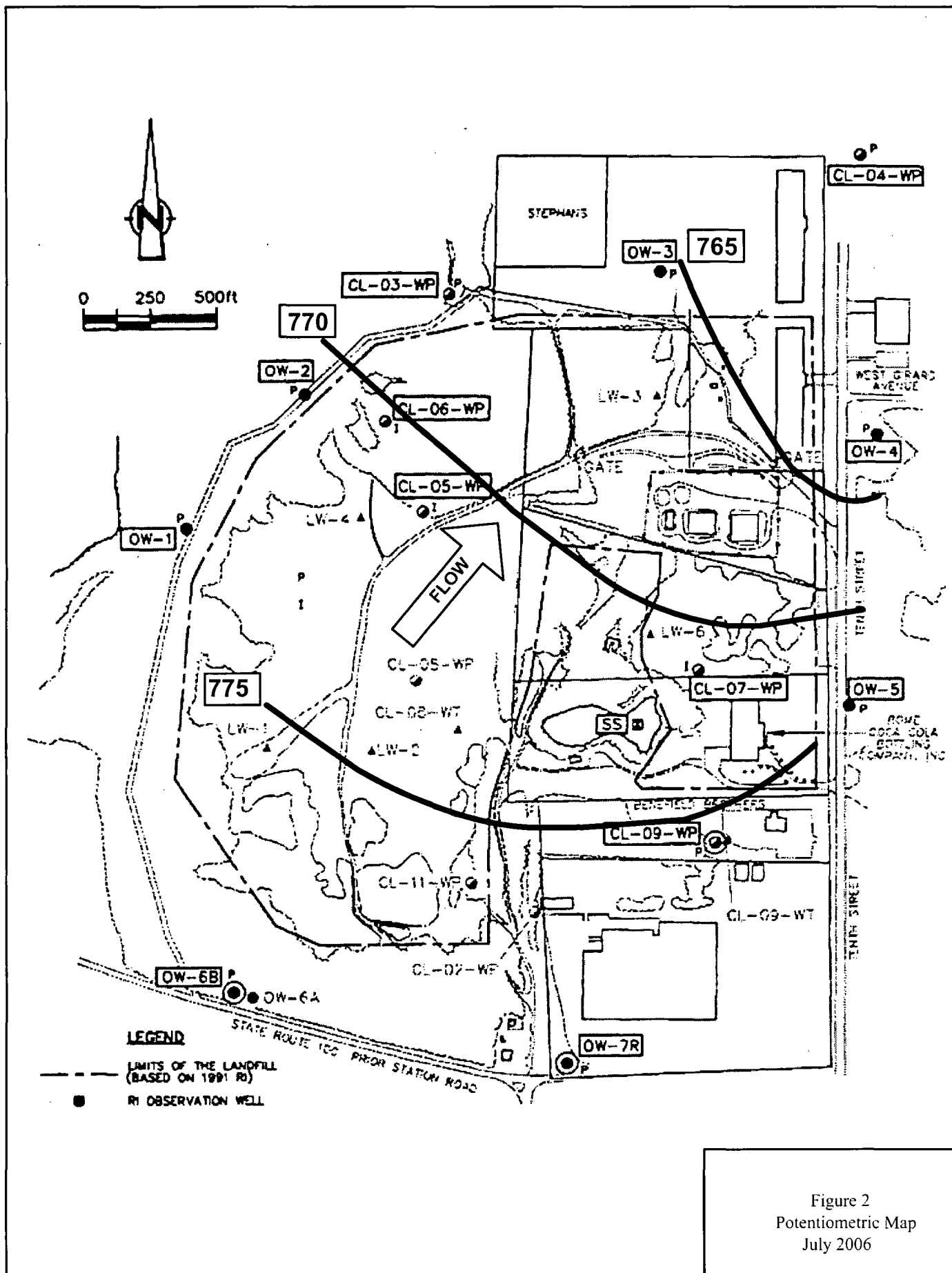


Figure 2  
Potentiometric Map  
July 2006

**Appendix A**  
**Historic Ground-Water Data**

**Monitoring Well OW-2**

Analyte	1/5/1995	4/27/1995	7/20/1995	10/23/1995	1/3/1996	4/24/1996	7/10/1996	10/24/1996	2/12/1997	9/9/1997	7/26/2006
Beryllium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001
Chromium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
Lead	< 0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.0171 J	0.000547
Manganese	0.587	0.527	1.17	0.285	0.468	0.305	0.782	0.682	0.191	1.26	0.0456

**Monitoring Well OW-3**

Analyte	1/10/1995	4/26/1995	7/22/1995	10/26/1995	1/4/1996	4/23/1996	7/11/1996	10/24/1996	2/18/1997	9/10/1997	7/26/2006
Beryllium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001
Chromium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
Lead	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.000805
Manganese	0.114	4.89	1.16	4.99	4.48	4.92	5.3	4.52	4.83	4.64	1.43

**Monitoring Well OW-4**

Analyte	1/6/1995	4/25/1995	7/19/1995	10/25/1995	1/2/1996	4/24/1996	7/9/1996	10/23/1996	2/10/1997	9/9/1997	7/26/2006
Beryllium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001
Chromium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
Lead	< 0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001
Manganese	2.29	5.06	2.38	5.74	3.84	5.12	3.33	1.93	7.66	2.11	0.384

**Appendix A**  
**Historic Ground-Water Data**

**Monitoring Well OW-5**

Analyte	1/6/1995	4/25/1995	7/20/1995	10/25/1995	1/4/1996	4/22/1996	7/10/1996	10/23/1996	2/9/1997	9/9/1997	7/26/2006
Beryllium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001
Chromium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
Lead	< 0.005	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001
Manganese	0.0108	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.00555

**Monitoring Well CL-07-WP**

Analyte	5/2/1995	4/24/1996	7/26/2006
Beryllium	< 0.005	< 0.005	< 0.010
Cadmium	< 0.005	< 0.005	0.00125
Chromium	0.23	0.398	0.13
Lead	0.0268	0.0113	0.0049
Manganese	0.81	0.274	0.254

**Monitoring Well OW-7R**

Analyte	1/23/1995	4/28/1995	7/19/1995	10/24/1995	1/3/1996	4/24/1996	7/10/1996	10/24/1996	2/10/1997	9/10/1997	7/26/2006
Beryllium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00111
Chromium	0.0101	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02
Lead	0.011	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	0.00219
Manganese	0.491	0.202	0.232	0.227	0.252	0.252	0.225	0.191	0.167	0.202	0.0638

**Monitoring Well OW-6B**

Analyte	1/5/1995	4/25/1995	7/23/1995	10/26/1995	1/3/1996	4/24/1996	7/11/1996	10/28/1996	2/11/1997	9/10/1997	7/26/2006
Beryllium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.001
Chromium	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01062	< 0.01	< 0.01	< 0.02
Lead	< 0.005	0.005	< 0.003	< 0.003	0.0042	0.0036	< 0.003	< 0.003	< 0.003	< 0.003	< 0.001
Manganese	0.0451	0.0836	0.091	0.0967	0.152	0.07	0.124	0.296	0.0715	0.231	0.967

TABLE 5.3

GROUNDWATER METALS RESULTS FOR PERIMETER MONITORING WELLS  
REMEDIAL ACTION GROUNDWATER MONITORING  
CEDARTOWN MUNICIPAL LANDFILL SITE  
CEDARTOWN, GEORGIA

		OW-1							
Location:		W-3482-JOS-	W-3482-JOS-	GW-3482-JOS-	W-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-
Sample ID:		011095-09	051095-028	072095-05	102495-04	010396-10	042396-05	072696-01	102596-10
Date Sampled:		1/10/95	5/10/95	7/20/95	10/24/95	1/3/96	4/23/96	7/26/96	10/25/96
Parameters	Units								
Beryllium	mg/L	ND(0.005)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Cadmium	mg/L	ND(0.005)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Chromium	mg/L	ND(0.01)	ND(0.0100)	ND(0.0100)	ND(0.0100)	ND(0.0100)	ND(0.0100)	0.0104	ND(0.0100)
Lead	mg/L	ND(0.003)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)
Manganese	mg/L	2.83	3.25	3.05	3.24	3.49	4.18	0.0164	2.49

		OW-2								
Location:		W-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-	GW-3482-JOS-
Sample ID:		010595-01	042795-025	072095-06	102395-02	010396-09	042396-06(MS/MSD)	071096-06	071096-07	102496-06
Date Sampled:		1/5/95	4/27/95	7/20/95	10/23/95	1/3/96	4/24/96	7/10/96	7/10/96 (Dup)	10/24/96
Parameters	Units									
Beryllium	mg/L	ND(0.005)	ND(0.0050)	ND(0.005)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Cadmium	mg/L	ND(0.005)	ND(0.0050)	ND(0.005)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Chromium	mg/L	ND(0.01)	ND(0.0100)	ND(0.01)	ND(0.0100)	ND(0.0100)	ND(0.0100)	ND(0.0100)	ND(0.0100)	ND(0.0100)
Lead	mg/L	ND(0.005)	ND(0.0030)	ND(0.003)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)	ND(0.0030)
Manganese	mg/L	0.587	0.527	1.17	0.285	0.468	0.305	0.778	0.782	0.682

ND - Not detected at the reporting limit stated in parentheses.

**APPENDIX B**

**PUBLIC NOTICE**

# AFFIDAVIT OF PUBLICATION

State of Georgia, }  
County of Polk } S.S.

I Jennifer Garrett

do solemnly swear that I am the

Advertising Rep of THE

CEDARTOWN STANDARD, published at Cedartown,  
in the State of Georgia, and that from my personal knowl-  
edge and reference to files of said publication the adver-

tisement of Cedartown municipal Landfill

Superfund Site Five-Year Review

was inserted in THE CEDARTOWN STANDARD in space

of a display ad

on dates as follows: \_\_\_\_\_

Cedartown Standard

Tuesday, June 7, 2011

Subscribed and sworn to before me

This 7<sup>th</sup> day of June, 2011

Jennifer Garrett  
Patricia J. Corbin

Notary Public.

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Clipping  
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## **Cedartown Municipal Landfill Superfund Site Five-Year Review**

The U.S. Environmental Protection Agency (EPA) is conducting its third five-year review of the remedial actions taken at the Cedartown Municipal Landfill Superfund site in Polk County in Cedartown, Georgia. The site is bordered to the east by 10<sup>th</sup> Street and to the south by Prior Station Road (Route 100). The purpose of the five-year review is to ensure that the selected site remedies are effectively protecting public health and the environment. Five-year reviews are mandated under the Comprehensive Environmental Response, Compensation and Liability Act. The first five-year review at the site was completed in September 2001.

In 1993, EPA issued a Record of Decision (ROD) consisting of ground-water and surface-water monitoring and institutional controls (including cover maintenance, seep controls and land use restrictions) to address potential risk to human health and the environment. A contingency remedy of pump-and-treat was included in the ROD in case the ground-water performance standards could not be met.

Ground-water monitoring data collected at the site for two and one-half years indicated no constituents, except Manganese, remained above the performance standards. Additional ground-water data indicated that Manganese in ground water was naturally occurring and not the result of waste disposal activities at the site. Based on this information, ROD was amended in 1998 to remove the pump-and-treat contingency and discontinue monitoring. The site was deleted from the National Priorities List (NPL) in 1999.

EPA has formed a team to perform the five-year review and prepare a report by the end of September 2011. The five-year review process involves a comprehensive evaluation of the remediation work done at the site, including:

- Interviewing local officials and community members
- Reviewing land use zoning changes
- Checking current site conditions and access controls
- Reviewing monitoring records and reports

The information gathered will be evaluated by the review team, which will determine whether the remedy remains protective of public health and the environment. The team will then produce a final report to document its findings. The completion of the report will be publicly announced, and a copy of the report will be available to the public at the Cedartown Public Library, 245 East Ave, Cedartown, Georgia.

Public participation in the five-year review process is encouraged and welcomed. If you are interested in participating in the review process, please contact Mr. Kyle Bryant, EPA Community Involvement Coordinator at (800) 564-7577 or at the following address: EPA Region 4 Superfund Division, 61 Forsyth Street SW, Atlanta, GA 30303. Email: [Bryant.Kyle@epa.gov](mailto:Bryant.Kyle@epa.gov).

## **APPENDIX C**

### **SITE INSPECTION CHECKLIST**



(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

D-7

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office; recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency GA EPD  
 Contact Heather Clark Geologist 4/21/2011  
 Name Title Date Phone no.  
 Problems; suggestions; Report attached \_\_\_\_\_

Agency \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Name Title Date Phone no.  
 Problems; suggestions; Report attached \_\_\_\_\_

Agency \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Name Title Date Phone no.  
 Problems; suggestions; Report attached \_\_\_\_\_

Agency \_\_\_\_\_  
 Contact \_\_\_\_\_  
 Name Title Date Phone no.  
 Problems; suggestions; Report attached \_\_\_\_\_

4. **Other interviews (optional)** Report attached \_\_\_\_\_

Joseph Chupp, 158 Montana dr.

- Mr. Chupp had no previous knowledge of there being a  
landfill. He lives in Silverthorn west subdivision which is  
located WNW of the closed landfill.

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)				
1.	<b>O&amp;M Documents</b> O&M manual As-built drawings Maintenance logs Remarks: _____	Readily available Readily available Readily available	Up to date Up to date Up to date	<input checked="" type="radio"/> N/A <input type="radio"/> N/A <input type="radio"/> N/A
2.	<b>Site-Specific Health and Safety Plan</b> Contingency plan/emergency response plan Remarks: _____	Readily available Readily available	Up to date Up to date	<input checked="" type="radio"/> N/A <input type="radio"/> N/A
3.	<b>O&amp;M and OSHA Training Records</b> Remarks: _____	Readily available	Up to date	<input checked="" type="radio"/> N/A
4.	<b>Permits and Service Agreements</b> Air discharge permit Effluent discharge Waste disposal, POTW Other permits: _____ Remarks: _____	Readily available Readily available Readily available Readily available	Up to date Up to date Up to date Up to date	<input checked="" type="radio"/> N/A <input checked="" type="radio"/> N/A <input checked="" type="radio"/> N/A <input checked="" type="radio"/> N/A
5.	<b>Gas Generation Records</b> Remarks: _____	Readily available	Up to date	<input checked="" type="radio"/> N/A
6.	<b>Settlement Monument Records</b> Remarks: _____	Readily available	Up to date	<input checked="" type="radio"/> N/A
7.	<b>Groundwater Monitoring Records</b> Remarks: <u>Monitoring reports from 2006 obtained from EPA</u>	Readily available	Up to date	<input checked="" type="radio"/> <del>N/A</del>
8.	<b>Leachate Extraction Records</b> Remarks: _____	Readily available	Up to date	<input checked="" type="radio"/> N/A
9.	<b>Discharge Compliance Records</b> Air Water (effluent) Remarks: _____	Readily available Readily available	Up to date Up to date	<input checked="" type="radio"/> N/A <input checked="" type="radio"/> N/A
10.	<b>Daily Access/Security Logs</b> Remarks: _____	Readily available	Up to date	<input checked="" type="radio"/> N/A

## IV. O&amp;M COSTS

1. <b>O&amp;M Organization</b>			
State in-house	Contractor for State		
PRP in-house	Contractor for PRP		
Federal Facility in-house	Contractor for Federal Facility		
Other <u>Cedartown County operates the landfill &amp; maintains access roads on-site</u>			
2. <b>O&amp;M Cost Records</b>			
Readily available	Up to date	<b>O&amp;M costs unavailable</b>	
Funding mechanism/agreement in place			
Original O&M cost estimate	Breakdown attached		
Total annual cost by year for review period if available			
From _____	To _____	Total cost _____	Breakdown attached
Date _____	Date _____		
From _____	To _____	Total cost _____	Breakdown attached
Date _____	Date _____		
From _____	To _____	Total cost _____	Breakdown attached
Date _____	Date _____		
From _____	To _____	Total cost _____	Breakdown attached
Date _____	Date _____		
From _____	To _____	Total cost _____	Breakdown attached
Date _____	Date _____		
3. <b>Unanticipated or Unusually High O&amp;M Costs During Review Period.</b>			
Describe costs and reasons: _____			
_____			
_____			
_____			
_____			
V. ACCESS AND INSTITUTIONAL CONTROLS			
Applicable		N/A	
A. Fencing			
1. <b>Fencing damaged</b>	Location shown on site map	Gates secured	N/A
Remarks <u>Fence line is damaged along some parts of the perimeter</u>			
B. Other Access Restrictions			
1. <b>Signs and other security measures</b>	Location shown on site map	<u>N/A</u>	
Remarks _____			

C. Institutional Controls (ICs)				
1.	<b>Implementation and enforcement</b>			
	Site conditions imply ICs not properly implemented	Yes	<input checked="" type="radio"/> No	N/A
	Site conditions imply ICs not being fully enforced	Yes	<input checked="" type="radio"/> No	N/A
	Type of monitoring (e.g., self-reporting, drive by) _____			
	Frequency _____			
	Responsible party/agency _____			
	Contact _____			
	Name	Title	Date	Phone no.
	Reporting is up-to-date		Yes	No <input checked="" type="radio"/> N/A
	Reports are verified by the lead agency		Yes	No <input checked="" type="radio"/> N/A
	Specific requirements in deed or decision documents have been met		<input checked="" type="radio"/> Yes	No <input type="radio"/> N/A
	Violations have been reported		Yes <input checked="" type="radio"/> No <input type="radio"/>	N/A
	Other problems or suggestions:		Report attached	
	_____			
	_____			
	_____			
2.	<b>Adequacy</b>	<input checked="" type="radio"/> ICs are adequate	ICs are inadequate	N/A
	Remarks	_____		
	_____			
<b>D. General</b>				
1.	<b>Vandalism/trespassing</b>	Location shown on site map	No vandalism evident	
	Remarks	No vandalism is apparent. City says that poaching on-site has occurred		
2.	<b>Land use changes on site</b>	<input checked="" type="radio"/> N/A		
	Remarks	_____		
3.	<b>Land use changes off site</b>	<input checked="" type="radio"/> N/A		
	Remarks	_____		
<b>VI. GENERAL SITE CONDITIONS</b>				
A. Roads	Applicable	N/A		
1.	<b>Roads damaged</b>	Location shown on site map	<input checked="" type="radio"/> Roads adequate	N/A
	Remarks	_____		

**B: Other Site Conditions**

Remarks Peoples used to hunt on-site, & there has been  
hunting in the past. Maintenance has taken steps to limit  
access to the site. Access trails are cleared once  
per year.

**VII. LANDFILL COVERS**      Applicable      N/A**A. Landfill Surface**

1. **Settlement (Low spots)**      Location shown on site map      Settlement not evident  
 Areal extent \_\_\_\_\_ Depth \_\_\_\_\_  
 Remarks \_\_\_\_\_

2. **Cracks**      Location shown on site map      Cracking not evident  
 Lengths \_\_\_\_\_ Widths \_\_\_\_\_ Depths \_\_\_\_\_  
 Remarks \_\_\_\_\_

3. **Erosion**      Location shown on site map      Erosion not evident  
 Areal extent \_\_\_\_\_ Depth \_\_\_\_\_  
 Remarks \_\_\_\_\_

4. **Holes**      Location shown on site map      Holes not evident  
 Areal extent \_\_\_\_\_ Depth \_\_\_\_\_  
 Remarks \_\_\_\_\_

5. **Vegetative Cover**      Grass      Cover properly established      No signs of stress  
Trees/Shrubs (indicate size and locations on a diagram)  
 Remarks \_\_\_\_\_

The landfill cover has become a pine forest with 15-25 year old trees

6. **Alternative Cover (armored rock, concrete, etc.)**      N/A  
 Remarks \_\_\_\_\_

7. **Bulges**      Location shown on site map      Bulges not evident  
 Areal extent \_\_\_\_\_ Height \_\_\_\_\_  
 Remarks \_\_\_\_\_

8.	<b>Wet Areas/Water Damage</b>	<u>Wet areas/water damage not evident</u>	
	Wet areas	Location shown on site map	Areal extent
	Ponding	Location shown on site map	Areal extent
	Seeps	Location shown on site map	Areal extent
	Soft subgrade	Location shown on site map	Areal extent
	Remarks		
9.	<b>Slope Instability</b>	Slides	Location shown on site map <u>No evidence of slope instability</u>
	Areal extent		
	Remarks		
B.	<b>Benches</b>	Applicable: <u>N/A</u>	
(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)			
1.	<b>Flows Bypass Bench</b>	Location shown on site map	<u>N/A or okay</u>
	Remarks		
2.	<b>Bench Breached</b>	Location shown on site map	<u>N/A or okay</u>
	Remarks		
3.	<b>Bench Overtopped</b>	Location shown on site map	<u>N/A or okay</u>
	Remarks		
C.	<b>Letdown Channels</b>	Applicable: <u>N/A</u>	
(Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1.	<b>Settlement</b>	Location shown on site map	<u>No evidence of settlement</u>
	Areal extent	Depth	
	Remarks		
2.	<b>Material Degradation</b>	Location shown on site map	<u>No evidence of degradation</u>
	Material type	Areal extent	
	Remarks		
3.	<b>Erosion</b>	Location shown on site map	<u>No evidence of erosion</u>
	Areal extent	Depth	
	Remarks		

4.	<b>Undercutting</b> Areal extent _____ Remarks _____	Location shown on site map _____ Depth _____	<u>No evidence of undercutting</u>	
5.	<b>Obstructions</b> Type _____ Location shown on site map _____ Size _____ Remarks _____	Areal extent _____	<u>No obstructions</u>	
6.	<b>Excessive Vegetative Growth</b> No evidence of excessive growth Vegetation in channels does not obstruct flow Location shown on site map _____ Remarks <u>Landfill cover has become pine forest</u>	Type <u>Pine Forest</u> Areal extent _____		
<b>D. Cover Penetrations</b> Applicable: <u>N/A</u>				
1.	<b>Gas Vents</b> Properly secured/locked _____ Evidence of leakage at penetration _____ <u>N/A</u> Remarks _____	Active Functioning _____	Passive Routinely sampled _____ Needs Maintenance _____	Good condition _____
2.	<b>Gas Monitoring Probes</b> Properly secured/locked _____ Evidence of leakage at penetration _____ Remarks _____	Functioning _____	Routinely sampled _____ Needs Maintenance _____	Good condition _____ <u>N/A</u>
3.	<b>Monitoring Wells (within surface area of landfill)</b> Properly secured/locked _____ Evidence of leakage at penetration _____ Remarks <u>Some wells are without locks. One well had a broken concrete pad. Well conditions vary @ the site.</u>	Functioning _____	Routinely sampled _____ <u>Needs Maintenance</u>	Good condition _____ N/A
4.	<b>Leachate Extraction Wells</b> Properly secured/locked _____ Evidence of leakage at penetration _____ Remarks _____	Functioning _____	Routinely sampled _____ Needs Maintenance _____	Good condition _____ <u>N/A</u>
5.	<b>Settlement Monuments</b> Remarks _____	Located _____	Routinely surveyed _____	<u>N/A</u>



<b>E. Gas Collection and Treatment</b>		Applicable	<u>N/A</u>
1.	<b>Gas Treatment Facilities</b> Flaring Good condition Remarks _____	Thermal destruction Needs Maintenance	Collection for reuse
2.	<b>Gas Collection Wells, Manifolds and Piping</b> Good condition Remarks _____	Needs Maintenance	
3.	<b>Gas Monitoring Facilities</b> (e.g., gas monitoring of adjacent homes or buildings) Good condition Remarks _____	Needs Maintenance	N/A
<b>F. Cover Drainage Layer</b>		Applicable	<u>N/A</u>
1.	<b>Outlet Pipes Inspected</b> Remarks _____	Functioning	N/A
2.	<b>Outlet Rock Inspected</b> Remarks _____	Functioning	N/A
<b>G. Detention/Sedimentation Ponds</b>		Applicable	<u>N/A</u>
1.	<b>Siltation</b> Areal extent _____ Depth _____ Siltation not evident Remarks _____		N/A
2.	<b>Erosion</b> Areal extent _____ Depth _____ Erosion not evident Remarks _____		
3.	<b>Outlet Works</b> Remarks _____	Functioning	N/A
4.	<b>Dam</b> Remarks _____	Functioning	N/A

<b>H. Retaining Walls</b>		Applicable	<u>N/A</u>
1.	<b>Deformations:</b> Horizontal displacement _____ Rotational displacement _____ Remarks _____	Location shown on site map _____	Deformation not evident
2.	<b>Degradation:</b> Remarks _____	Location shown on site map _____	Degradation not evident
<b>I. Perimeter Ditches/Off-Site Discharge</b>		Applicable	<u>N/A</u>
1.	<b>Siltation</b> Areal extent _____ Remarks _____	Location shown on site map _____ Depth _____	Siltation not evident
2.	<b>Vegetative Growth</b> Vegetation does not impede flow Areal extent _____ Remarks _____	Location shown on site map _____ Type _____	N/A
3.	<b>Erosion</b> Areal extent _____ Remarks _____	Location shown on site map _____ Depth _____	Erosion not evident
4.	<b>Discharge Structure</b> Remarks _____	Functioning	N/A
<b>VIII. VERTICAL BARRIER WALLS</b>		Applicable	<u>N/A</u>
1.	<b>Settlement</b> Areal extent _____ Remarks _____	Location shown on site map _____ Depth _____	Settlement not evident
2.	<b>Performance Monitoring</b> Type of monitoring _____ Performance not monitored Frequency _____ Head differential _____ Remarks _____		Evidence of breaching

<b>IX. GROUNDWATER/SURFACE WATER REMEDIES</b>		Applicable	N/A
<b>A. Groundwater Extraction Wells, Pumps, and Pipelines</b>		Applicable	N/A
1.	<b>Pumps, Wellhead Plumbing, and Electrical</b> Good condition      All required wells properly operating      Needs Maintenance      N/A Remarks _____		
2.	<b>Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> Good condition      Needs Maintenance Remarks _____		
3.	<b>Spare Parts and Equipment</b> Readily available      Good condition      Requires upgrade      Needs to be provided Remarks _____		
<b>B. Surface Water Collection Structures, Pumps, and Pipelines</b>		Applicable	N/A
1.	<b>Collection Structures, Pumps, and Electrical</b> Good condition      Needs Maintenance Remarks _____		
2.	<b>Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> Good condition      Needs Maintenance Remarks _____		
3.	<b>Spare Parts and Equipment</b> Readily available      Good condition      Requires upgrade      Needs to be provided Remarks _____		

C. Treatment System		Applicable	N/A
1.	<b>Treatment Train (Check components that apply)</b> Metals removal _____ Oil/water separation _____ Bioremediation _____ Air stripping _____ Carbon adsorbers _____ Filters _____ Additive (e.g., chelation agent, flocculent) _____ Others _____ Good condition _____ Needs Maintenance _____ Sampling ports properly marked and functional _____ Sampling/maintenance log displayed and up-to date _____ Equipment properly identified _____ Quantity of groundwater treated annually _____ Quantity of surface water treated annually _____ Remarks _____		
2.	<b>Electrical Enclosures and Panels (properly rated and functional)</b> N/A _____ Good condition _____ Needs Maintenance _____ Remarks _____		
3.	<b>Tanks, Vaults, Storage Vessels</b> N/A _____ Good condition _____ Proper secondary containment _____ Needs Maintenance _____ Remarks _____		
4.	<b>Discharge Structure and Appurtenances</b> N/A _____ Good condition _____ Needs Maintenance _____ Remarks _____		
5.	<b>Treatment Building(s)</b> N/A _____ Good condition (esp. roof and doorways) _____ Needs repair _____ Chemicals and equipment properly stored _____ Remarks _____		
6.	<b>Monitoring Wells (pump and treatment remedy)</b> Properly secured/locked _____ Functioning _____ Routinely sampled _____ Good condition _____ All required wells located _____ Needs Maintenance _____ N/A _____ Remarks _____		
D. Monitoring Data <i>GW monitoring data is 5 years old.</i>			
1.	<b>Monitoring Data</b> Is routinely submitted on time _____ Is of acceptable quality _____		
2.	<b>Monitoring data suggests:</b> Groundwater plume is effectively contained _____ Contaminant concentrations are declining _____		

<b>D. Monitored Natural Attenuation</b>			
1.	<b>Monitoring Wells</b> (natural attenuation remedy)		
	Properly secured/locked	Functioning	Routinely sampled
	All required wells located	Needs Maintenance:	
Remarks			Good condition <u>N/A</u>
<b>X. OTHER REMEDIES</b>			
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.			
<b>XI. OVERALL OBSERVATIONS</b>			
A.	<b>Implementation of the Remedy</b>		
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).			
<p>The landfill was capped and covered to prevent exposure to its contents. The remedy is functioning as designed however, the pine forest growing on top could damage the cover of the landfill and allow for exposure to the contents in the landfill.</p>			
B. Adequacy of O&M			
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.			
<p>Currently the only maintenance that occurs at the landfill site is clearing of the access trails. The access trails throughout the site are cleared and maintained once per year.</p>			

**C. Early Indicators of Potential Remedy Problems**

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

~~The~~ As discussed above, the protectiveness of the remedy could be compromised by the pine wood Garry oak that is growing on the landfill cover. The pine Garry oak could break up the integrity of the landfill cover and allow for exposure to its contents.

**D. Opportunities for Optimization**

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

## **APPENDIX D**

### **SITE PHOTOS**



Mature pine trees growing on the cap.



Interior fence with mature trees growing on the cap in the distance.





Mature pine trees growing on the cap.



Interior fence with mature trees growing on the cap in the distance.





Maintained trail.



Vegetation growing on the cap.





Vegetation growing on the cap.



Mature trees and vegetation growing on the cap.





Cleared trail and mature trees growing on either side of the trail.



Cleared trail and mature trees growing on either side of the trail.





Cleared trail and mature trees growing on either side of the trail.



Mature trees growing on the cap.





Mature trees growing on the cap.





Damaged well.





Damaged well.





Damaged well.



Damaged well.





Maintained well.





Bare spot on cleared trail.





Mature trees growing on the cap.





Cleared trail and mature trees growing on either side of the trail.





Cleared trail and mature trees growing on either side of the trail.





Monitoring well.





Monitoring well.



**APPENDIX E**

**INTERVIEW SHEETS**

## **Interview Form for Cedartown Municipal Landfill Five-Year Review**

Site Name: Cedartown Municipal Landfill EPA ID No.: GAD980495402  
Interviewer Name: Frank Burwell Affiliation: Corps of Engineers  
Subject's Name: Brian Farrier Affiliation: EPA Region IV  
Subject's Contact Information: Farrier.Brian@epa.gov  
Time: 15:00 Date: May 31, 2011  
Type of Interview: e-Mail  
Location of Interview: N/A

### **EPA RPM**

1. What is your overall impression of the project?

N/A

2. What effects have site operations had on the surrounding community?

This site has had minimal effects on the surrounding community.

3. Are you aware of any community concern regarding the site or its operation and administration?

No.

4. Do you feel well informed about the site's activities and progress?

Yes.

5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

EPA would like the City to consider clearing the trees on the landfill cap so that routine maintenance and visual inspections of the cap can be performed regularly. Although clearing activities would involve construction activities that could potentially affect the integrity of the cap, a major storm event would affect the cap even more adversely if the trees are uprooted.

# Georgia Department of Natural Resources

2 Martin Luther King, Jr. Dr., SE, Suite 1154, Atlanta, Georgia 30334-9000

Mark Williams, Commissioner

Environmental Protection Division

F. Allen Barnes, Director

Land Protection Branch

Mark Smith, Branch Chief

Phone: 404/656-7802 FAX: 404/651-9425

## **Cedartown Municipal Landfill Third Five-Year Review Georgia EPD Survey Response**

### **1. What is your overall impression of the project?**

It appears that the site remedial design was appropriate. However, there has been a lack of adherence to the requirements of the decision document (1998 ROD Amendment) for the site, as the landfill cover has neither been maintained nor inspected since the site was removed from the National Priorities List (NPL) in 1999. In addition, the requirement for groundwater sampling in support of each Five Year Review (FYR) was not adequately fulfilled during the first FYR, nor was groundwater sampling performed as part of the Third FYR. The performance of these requirements is the responsibility of the PRP (Cedartown Municipal Landfill Group) under the Unilateral Administrative Order for Remedial Design and Remedial Action dated March 22, 1994. The first and second Five-Year Reviews (FYRs) for CML indicated that the landfill cover had neither been maintained nor inspected, yet these issues have not been addressed as of the third FYR. The ROD Amendment should be enforced to ensure protection of human health and the environment.

### **2. What effects have site operations had on the surrounding community?**

We are not aware of effects on the surrounding community.

### **3. Are you aware of any community concern regarding the site or its operation and administration?**

No.

### **4. Do you feel well informed about the site's activities and progress?**

In terms of the availability of information regarding the site, yes.

### **5. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?**

We concur with EPA's recommendation that the landfill cap be restored and inspected and maintained on a regular basis. We recommend that this be done on a semiannual basis. In addition, we concur with the abandonment of the damaged wells listed in Section 4.3 of the FYR and all wells found in the interior of the landfill (wells that penetrate through waste and into the underlying bedrock), as these wells could provide a preferential pathway for any remaining leachate within the landfill to enter the bedrock beneath the site. We recommend that these wells be abandoned in accordance with the Georgia Water Well Standards Act and the US EPA Field Branches Quality System and Technical Procedures (FBQSTP).

## **APPENDIX F**

### **DEED RESTRICTIONS**

CEDARTOWN. GEORGIA

CERTIFICATION OF ORDINANCE

CITY OF CEDARTOWN

I, EMILY C. SHAW, AS CITY CLERK AND CUSTODIAN OF RECORDS FOR THE CITY OF CEDARTOWN, HEREBY CERTIFY THAT THE ATTACHED ORDINANCE IS A TRUE AND CORRECT COPY OF ORDINANCE NO. 14. 1996, ZONING. AS CONTAINED ON FILE IN THE CITY CLERKS OFFICE OF THE CITY OF CEDARTOWN.

THIS THE 6th DAY OF DECEMBER, 1996.

SIGNED:

Emily C. Shaw  
CITY CLERK

ORDINANCE NO. 14, 1996

**AN ORDINANCE BY THE CITY COMMISSION  
OF THE CITY OF CEDARTOWN, GEORGIA**

WHEREAS, there is a need to change the districts within the zoning code of the City of Cedartown, as contained in appendix "B" entitled "zoning", As to article four (IV) thereof; and

WHEREAS, recently the City of Cedartown has determined it necessary to acquire certain property to be annexed to the City of Cedartown, which said property was formerly used for the disposal of municipal solid waste in the city and was the former site of the "Cedartown Landfill"; and

WHEREAS, the Commission desires to restrict the zoning within the uses of this property, and must therefore create another zoning classification within the city concerning this special use; and

WHEREAS, in the future there may be certain additional special use zoning classifications for the uses hereinafter defined or similar problems which may result in amendments of the zoning ordinance of the City of Cedartown in such special circumstances; and

WHEREAS, there is a need by this ordinance to adopt certain provisions to authorize these changes in this ordinance;

Now, Therefore, be it ordained by the City Commission of the City of Cedartown, and is hereby ordained and established by said authority as follows:

**Section 1:**

This ordinance shall be first read and reviewed by the Commission at its September, 1996 meeting. A public notice concerning these proposed changes in the zoning code of the City of Cedartown shall, after the ordinance has been reviewed, be published in the Cedartown Standard. Said notice is attached here to exhibit "A" and made apart hereof by reference. Public comments shall be obtained before final approval of these amendments, at a public hearing to be called and held at the regular October meeting of the City Commission of the City of Cedartown, to be held on Monday, October 14, 1996 at seven o'clock in the evening.

**Section 2:**

The Code of the City of Cedartown as contained in appendix "B" thereof, in article four shall stand amended by adding to section 4.1 thereof entitled "Division into Districts" the following two new additional districts or designations to be defined as follows:

"SU-1 special use (restricted) district

SU-2 (Special Use Classification)"

**Section 3:**

The Code of the City of Cedartown shall stand further amended as to Appendix "B" article seven (VII) entitled "Use Requirements by District", by adding thereto a new section to be designated as section 7.10. Said section shall read as follows:

"Sec.7.10. Special Use (Restricted) district"

Within a special use (Restricted) district, the following uses shall be permitted:

7.10.1. The planting of permanent vegetation, ground cover, timber or any other vegetation to prevent erosion, sedimentation or to prevent soil disturbance in the designated district.

7.10.2. The property in this classification has previously been declared to potentially be a threat to human health and the environment; or could be potentially such a threat, based upon either federal regulations, state procedures and/or local decisions of the zoning and planning commission of the City of Cedartown. As such, no improvements which would allow human occupation of the property, no ground water collection facilities, ponds, lakes; nor any wells (drinking water, commercial use wells, raw water or any other type wells) shall be permitted in this district.

**Section 4:**

The Code of the City of Cedartown shall stand further amended by creating a new article eight (VIII) to Appendix "B"-

Zoning which shall be entitled "Article VIII-Special Use Classification District". This new article shall read as follows:

**ARTICLE VIII (8). SPECIAL USE DISTRICT**

- a) A "Special Use District" shall be defined as a district which creates , adjacent to abutting Residential, Commercial, or Industrial zones, a certain new classification of property based upon a "Special Use" of said property, or special stipulations concerning the use of the property; since the property because of its unique character, location or use does not fit within the general use requirements by districts, as contained in article VII hereof. This use classification is based upon either special conditions for the use of the property, certain restrictions that will be applied to the use, or other similar circumstances so that the property thereafter will be designated with the Special Use. As an example, An "R-1" use could have a further classification of "SU" Appended to it in that the residential single family dwellings to be built upon the property shall be based upon lots with either additional set back requirements as those contained in the subdivisions regulations, square footage use restriction, or other similar restrictions that may be placed by the developer of the property; or Special Uses placed upon the property by the the city in connection with any review and approval of zoning of the property.
- b) The use to be permitted by this designation either as a special district under this article, or as a designation within any other Residential, Commercial or Industrial District, shall consider the following uses and matters affecting the property:
  - 1) The use and zoning of surrounding property;
  - 2) The need for a special buffer, special circumstances with regard to the zoning



classification, for other special use requirement of the property based upon location, terrain, size, topography or similar criteria;

- 3) The overall zoning development plan of the City of Cedartown as it relates to the geographical district within one square mile radius of the location of the property;
- 4) Environmental conditions, uses, concerns for similar requirements;
- 5) The submitted development plan, or proposed building plan of the property.
- 6) Other criteria as may be established by the planning commission or building inspector of the City of Cedartown in a review of any requested zoning.

**Section 5:**

All laws or parts of laws in conflict herewith are specifically repealed. In the event any portion of this ordinance should be declared unconstitutional or otherwise unenforceful, all remaining portions thereof shall continue in full force and effect.

ADOPTED AND APPROVED by the City Commission of the City of Cedartown on the 14th day of October, 1996, at a regular meeting thereof, duly called and held, all Commissioners voting "Aye", none voting "No".

APPROVED:

By: Bert Wood

CHAIRMAN, CEDARTOWN CITY  
COMMISSION

ATTEST:  
[Signature]  
SECRETARY, CEDARTOWN CITY  
COMMISSION

**EXHIBIT "A"**

**NOTICE OF ZONING AMENDMENT-CITY OF CEDARTOWN**

Notice is hereby given that an ordinance has been introduced at the September, 1996 meeting of the Cedartown City Commission which, if adopted would make some changes in the zoning code of the city. The first change would be to create a special restricted use classification for property, so that property which may be environmentally hazardous, subject to environmental investigations, or otherwise in need of special restrictions could be so classified pursuant to the zoning ordinances of Cedartown.

The Ordinance also would create a "Special Use Classification" which could be added to the existing zoning restrictions of the City of Cedartown, or create a Special Use District for property based upon the property's unique topography, uses to be made of the property, the need for zoning buffers, or similar matters.

The effect of this ordinance is to create two new zoning classifications which will be used in the future in making decisions concerning zoning within the City of Cedartown. A copy of the proposed ordinance amendments is on file in the office of the Clerk at City Hall. The document is available for public inspection during normal business hours.

A Public Hearing, concerning this proposed zoning ordinance amendment shall be conducted at the October regular meeting of the City Commission of the City of Cedartown, to be held on October 14, 1996 at seven o'clock (7:00) in the evening.

This 9<sup>th</sup> day of September, 1996.

  
Emily C. Shaw, City Clerk  
City of Cedartown

7/8/6

879  
EXHIBIT "A"  
NOTICE OF  
ZONING AMENDMENT  
CITY OF CEDARTOWN

Notice is hereby given that an ordinance has been introduced at the September, 1966 meeting of the Cedartown City Commission which, if adopted would make some changes in the zoning code of the city. The first change would be to create a special restricted use classification for property, so that property which may be environmentally hazardous, subject to environmental investigations, or otherwise in need of special restrictions could be so classified pursuant to the zoning ordinances of Cedartown.

The Ordinance also would create a "Special Use Classification" which could be added to the existing zoning restrictions of the City of Cedartown, or create a Special Use District for property based upon the property's unique topography, uses to be made of the property, the need for zoning buffers, or similar matters.

The effect of this ordinance is to create two new zoning classifications which will be used in the future in making decisions concerning zoning within the City of Cedartown. A copy of the proposed ordinance amendments is on file in the office of the Clerk of City Hall. The document is available for public inspection during normal business hours.

A Public Hearing, concerning this proposed zoning ordinance amendment shall be conducted at the October regular meeting of the City Commission of the City of Cedartown.

Meeting, to be held on October 12, 1966 at seven o'clock (7:00) in the evening.

This 9th day of September, 1966.

Emory C. Shaw, City Clerk

City of Cedartown

September 19, 26, 1966

## **APPENDIX G**

### **TOXICITY REVIEW**

**Table G1 - Changes in Performance Standards**

GroundWater Contaminant	1993 ROD Remedy Performance Standards (ug/L)	1993 ROD Source	2006 Federal Performance Standards (ug/L)	GA State 2006 MCL (ug/L)	2011 Performance Standards (ug/L)	2011 GA State MCL (ug/L)	Change***
<b>Manganese**</b>	175 / 840	EPA	840	50*	840	50*	No
<b>Beryllium</b>	4	SDWA MCL	4	4	4	4	No
<b>Cadmium</b>	5	SDWA MCL	5	5	5	5	No
<b>Chromium</b>	100	SDWA MCL	100	100	100	100	No
<b>Lead</b>	15	EPA Action Level	15	15	15	15	No

Notes:

\*= 50 ppb is a secondary MCL.

\*\* = The Risk Based Concentration (RBC) for Manganese was changed as the result of a revision to the established Reference Dose. In November 1995, EPA changed the Performance Standard for Manganese for the Cedartown Municipal Landfill to 840 ppb. 175 ppb was the original performance standard contained in the ROD dated 1993.

\*\*\* = Change is relative to the standards stated in the ROD, as amended.

SDWA MCL = Safe Drinking Water Act Maximum Contaminant Level.

**Table G2 - Changes in Toxicity Factors**

	CSF ROD		RfD ROD		CSF 2011		RfD 2011	
	1/mg/kg/d		mg/kg/d		1/mg/kg/d	source	mg/kg/d	source
ORGANICS								
1,2-DCA	9.10E-02		NVA		9.10E-02	i	<b>2.00E-02</b>	p
INORGANICS								
Arsenic	1.75E+00		3.00E-04		<b>1.5</b>	i	3.00E-04	i
Barium	NVA		7.00E-02		NVA		<b>2.00E-01</b>	i
Beryllium	4.30E+00		5.00E-03		NVA		<b>2.00E-03</b>	i
Cadmium	NVA		1.00E-03		NVA		<b>1.00E-03</b>	i
Manganese	NVA		5.00E-03		NVA		<b>1.40E-01</b>	i
Nickel	NVA		2.00E-02		NVA		2.00E-02	i
Vanadium	NVA		3.00E-01		NVA		<b>9.00E-03</b>	i*
Zinc	NVA		2.00E-02		NVA		<b>3.00E-01</b>	i

ROD = 1993 ROD; Toxicity values from IRIS, 1992 unless otherwise noted

2011 = 2011 Toxicity values identified and selected in accordance with the recommended hierarchy provided in OSWER Directive 9285.7-53.

*Values shown in bold indicate where toxicity values have changed since ROD*

Key : CSF=Cancer Slope Factor RfD,=Reference Dose

i=IRIS p=PPRTV c=California EPA n=NCEA h=HEAST

Regional screening levels no longer use route to route extrapolation

i\* = Iris value for vanadium pentoxide

NVA = No toxicity factor available